

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/043640 A1

(51) International Patent Classification⁷: B23K 9/12 (74) Agent: SEPO LAINE OY; Itämerenkatu 3 B, FIN-00180 Helsinki (FI).

(21) International Application Number:

PCT/FI2003/000858

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT (utility model), PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:

12 November 2003 (12.11.2003)

(25) Filing Language:

Finnish

(26) Publication Language:

English

(30) Priority Data:

U20020455 13 November 2002 (13.11.2002) FI

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): KEMMPI OY [FI/FI]; PL 13, FIN-15801 Lahti (FI).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors; and
(75) Inventors/Applicants (for US only): HÄMÄLÄINEN, Jani [FI/FI]; Lepomäentie 74, FIN-15610 Lahti (FI). MÄKIMAA, Tapani [FI/FI]; Okeriostie 33, FIN-15800 Lahti (FI). HÄMÄLÄINEN, Olli [FI/FI]; Kreetantie 4, FIN-15540 Villähde (FI). TOIVONEN, Hannu [FI/FT]; Hympyläntie 2, FIN-17200 Vääksy (FI). HOKKANEN, Taisto [FI/FI]; Tevaskatu 6, FIN-15240 Lahti (FI).

WO 2004/043640 A1

(54) Title: ELECTRODE LINER TUBE

(57) Abstract: The purpose of the invention is to provide a filler wire guide tube, wherein the feeding resistance of the wire is lower than earlier, the deposition of material on the inner surface is smaller and that is sufficiently stiff to prevent formation of sharp bends. These problems are solved so, that the guide tube is formed of a two-layered plastic material, wherein the shell layer is high density polyethylene and the inner layer forming the tube of the filler wire guide is polyethylene that has been doped at least with particulate polytetrafluoroethylene (PTFE).